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ABSTRACT

This longitudinal study tested the hypothesis that maternal characteristics and maternal behavior with a child during infancy predicts the child's grade retention during the early elementary school years. In addition, teachers' ratings of the behaviors of children who are promoted or retained were analyzed to determine whether differences exist in social and emotional adjustment, as well as academic competence. The initial sample consisted of 321 low-income mothers of healthy infants, follow-ups at kindergarten entry were completed on 237 mothers and data on school retention during the first three years of school were completed on 209 children. Data were collected on mothers' characteristics and behaviors toward the infant during the third trimester of pregnancy and at four and twelve months postnatally; data were also collected on child grade retention or promotion and teachers' ratings of child academic competence and social adjustment. Factor analyses and analyses of variance revealed that maternal interactions with the infant predicts grade retention during the early school years. Moreover, mothers of children retained during the early school years were rated as lower on interactions with their infants at twelve than at four months. It was also found that teachers' ratings of child academic competence are significantly related to grade retention or promotion. (BB)

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Parenting and Child Behavior Predictors of Retention in Grades K, 1, and 2

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Parenting and Child Behavior Predictors of Retention in Grades K, 1, and 2

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Among the many predictors of grade retention have been southeastern region of residence, families below the poverty level, parents with less than 12 years of education (Rose, Medway, Cantrell, and Marcus, 1983) as well as sex and age of school entry of child (Langer, Kalk, and Searls, 1984). Findings that children who have participated in preschool intervention programs are less frequently retained during the elementary school years (Lazar and Darlington, 1982, McKey, et al., 1985) suggest that the child's competence at school entry may be related to early education experiences both at home and at school. The finding that retention is more common in first grade or during the entry year than in subsequent school years suggests that early experience may be more related to achievement of promotion standards during the school entry year.

Major reviews and analyses of the effects of nonpromotion (Jackson, 1975; Holmes and Matthews, 1984) appear to agree with the generalization that "Taken as a whole, the experimental data collected over the past 70 years fail to indicate any significant benefit of grade retention for the majority of students with academic or adjustment problems (Rose, Medway, Cantrell and Marcus, 1983, p. 206). Since grade retention is one cause of child being overage per grade

during adolescence, which in turn predicts school dropout, research on antecedents and correlates of retention is needed (Curtin, et al., 1983). This study was designed to test the hypothesis that maternal characteristics and maternal behavior during infancy would predict the child's grade retention during the early elementary school years. Teacher ratings of classroom behaviors of children who are promoted or retained were analyzed to determine whether differences exist in social and emotional adjustment as well as academic competence.

Method:

The initial sample of this longitudinal study consisted of 321 low-income mothers of healthy infants who were first interviewed while receiving prenatal services from public health clinics. Characteristics of the initial sample include 72 percent black, 44 percent married and 40 percent with 12 or more years of education. Follow-ups at kindergarten entry were completed on 237 mothers and complete data on school retention during the first three years of school were completed on 209 children. Sample sizes for specific analyses were often smaller because of missing data.

Data on mothers' characteristics and on mothers' behavior with the infant were collected during the third trimester of pregnancy and at four and twelve months postnatally. Data on child grade retention or promotion were collected from school records. Teacher ratings of child academic competence and

social adjustment were collected during the spring of each school year.

Observations of mother's behavior with the infant were quantified with ratings completed after the home visits at four and twelve months postnatally. Factor analyses of 75 items of the Attachment Inventory at four and twelve months revealed two major factors of Interaction/ Stimulation and of Punitiveness/Irritability (Schaefer and Hunter, 1983). Clusters of items within the positive sector of a two-dimensional organization were labelled Achievement Press, Stimulation, Interaction, Pleasure in Parenting, and Responsiveness and within the negative sector were labelled Low Interaction, Unresponsiveness, Insensitivity, Irritability, and Punitiveness. Only the clusters that were substantially related to the dimension of Interaction/ Stimulation and that have shown substantial stability from four to twelve months are included in this analysis of grade retention.

Teacher ratings of the child were collected with the Classroom Behavior Inventory that includes scales of Verbal Intelligence, Curiosity/Creativity, Independence, Task-Orientation, Considerateness, Extroversion, Introversion, Dependency, Distractibility and Hostility. High internal consistency reliabilities, substantial inter-rater reliabilities, and significant year-to-year stability correlations have been found for these scales. Factor analyses reveal dimensions of (1) Academic Competence with

substantial loadings on Verbal Intelligence, Curiosity/ Creativity, Independence, and Task-Orientation; (2) Extraversion versus Introversion; and (3) Considerateness versus Hostility (Schaefer, Edgerton and Hunter, 1985).

Analyses of variance were completed for differences in parent characteristics and in parent behavior at four and twelve months postnatally and for teacher ratings of child behavior among five groups of children: (1) retained in both kindergarten and the second school year, (2) retained in kindergarten, i.e., the first year of school only, (3) children retained in the second year only, (4) retained in the third year only, and (5) promoted each of the three school years.

Initial interpretations of implications of the findings for school policies and programs were presented to school staff and principals in a school system in which the data were collected. Discussion of implications of the findings for school policy and programs was continued in a small group meeting with school personnel.

Results:

Forty-six percent of this sample of 209 low-income but healthy at birth children were retained at least once during the first three years of school with 6 percent retained during both the first and second year; 14 percent retained in kindergarten, i.e., the first year only; 17 percent in the second year only; and 9 percent in the third year only. Only

54 percent of the children in this low-income group were never retained during the first three years of school.

The analysis of significance of differences between retention groups reported in the Table reveals that school retention can be predicted from maternal behavior with the infant at four and twelve months postnatally. Although similar patterns of difference between means of maternal behavior for the retention groups are seen at four and twelve months, only Stimulation and Achievement Press are significant at the .05 level at four months postnatally while each of the maternal behavior clusters of Interaction, Stimulation, Achievement Press and Low Interaction are significant at the .001 level at twelve months. The clearer differences at twelve months are related to lower ratings of Interaction at twelve months than at four months for mothers of children retained during the first two years of school while mothers of children who were never retained have similar ratings at four and twelve months. Mothers' behavior with the never retained group of children is consistently significantly different from mothers' behavior with children retained during the first two years. Mothers of children retained during kindergarten only are similar to mothers of children retained for two years while mothers of children retained only during the second and third school years are similar to mothers of never retained children.

[Insert Table About Here]

Means and Significance of Differences Among Retention Groups on Maternal Behavior and Characteristics

	Significance	Means				
		Retained Year 1 and 2	Retained Year 1 only	Retained Year 2 only	Retained Year 3 only	Never Retained
Maternal Behavior						
Interaction						
Four Months	NS	35.7	37.6	41.4	38.4	37.6
Twelve Months	.001	27.9	34.1	37.8	35.9	38.1
Stimulation						
Four Months	.05	20.9	23.3	25.3	23.9	26.0
Twelve Months	.001	17.2	21.7	24.1	22.8	25.7
Achievement Press						
Four Months	.05	13.7	14.1	15.0	14.7	16.6
Twelve Months	.001	10.3	12.6	14.3	13.9	15.4
Low Interaction						
Four Months	NS	12.5	11.0	10.2	12.3	10.0
Twelve Months	.001	16.5	12.0	11.0	11.0	10.0
Maternal Characteristics						
Uncommunicative/Uncooperative During Pregnancy	.001	9.0	9.0	6.0	6.0	6.4
External Locus of Control Pregnancy and Infancy	.01	15.3	12.5	10.0	9.1	9.1
Mother's Education	.01	10.6	10.0	11.1	11.6	11.0

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Significant differences by grade retention groups are seen for maternal characteristics during pregnancy and infancy. Mothers of the children retained for the first two years are significantly less communicative and cooperative during the pregnancy interview with the mother. Mothers of children retained for the first two years and for the first year of school have fewer years of education than mothers of children who are never retained or are retained in the second or third year only. The data consistently reveal that mothers of children retained during kindergarten are most dissimilar from mothers of children never retained, and that mothers of children retained only during the second and third year of school are intermediate between the mothers of children who are retained in kindergarten and the mothers of children who are never retained.

Analyses of teacher ratings of child behavior in the classroom, which will not be reported here, reveal that teacher ratings of Verbal Intelligence are most correlated with grade promotion. The scales of Curiosity/Creativity, Independence, and Task-Orientation that also have loadings on a factor of Academic Competence also reveal differences between children who are promoted and retained in grade. Teacher ratings during kindergarten on scales that load on the factor of Academic Competence are significantly correlated with the maternal behaviors and characteristics that are significantly related to grade promotion (Schaefer and Hunter, 1983). Thus, maternal behaviors and

characteristics that predict child academic competence are related to child grade retention during the year of school entry and, less significantly, during the second and third year of school. Mothers' behavior of Punitiveness and Irritability at four and twelve months and child social adjustment dimensions of Extraversion versus Introversion and Considerateness versus Hostility typically are not significantly related to child grade retention. Thus, only maternal behaviors that predict academic competence and teacher ratings of child academic competence are significantly related to grade promotion or retention.

Discussion:

This study that reveals high rates of grade retention during the early school years for a low-income sample extends previous research findings that variations in maternal demographic and psychosocial characteristics within a low-income sample predict the child's grade retention. The major finding is that maternal interaction with the infant during the first year of life predicts grade retention during the school entry years.

A significant finding is that mothers of children retained during the early school years are rated as lower on interaction with their infants at twelve than at four months while mothers of children never retained show similar levels of interaction at the two ages. The finding that mother-

infant interaction at twelve months is more correlated with child verbal intelligence during kindergarten is probably related to the higher prediction of grade retention from mothers' behavior at twelve months. Perhaps mother's behavior is both predictive of mother's continuing interaction with the child and more effective in influencing verbal skills at twelve than at four months postnatally.

This finding that early maternal behavior, which probably also predicts the mother's continued educational activity with the infant, predicts grade retention supplements earlier research findings that early interventions reduce frequency of grade retention (Lazar and Darlington, 1982). This study suggests the need to determine whether the effects of early educational experiences in preschool upon grade retention are greater during the school entry year than in subsequent school years. Research suggests that interventions that enrich the child's educational experience before kindergarten entrance, either by strengthening and supporting parents' education of the child or by supplementing parents' education with preschool interventions, is most effective in reducing the frequency of grade retention during the school entry years. If there are different correlates of grade retention during different school years, perhaps different interventions are needed for prevention of early and of later grade retention.

Longitudinal research suggests the need for a life course perspectives that would map children's educational

trajectories or pathways over the life span (Elder, 1984). Significant events in a child's educational trajectory would include early education experiences in the home and in preschool, age at entry into kindergarten or first grade, grade promotion during the elementary and high school years, dropping out of high school or graduation, and college and postgraduate enrollment, dropping out, or graduation. The individual's trajectory could then be related to their subsequent work, marital, and parental trajectory. A life course perspective that links promotion and retention to subsequent events in the child's educational trajectory might contribute to evaluation of long-term effects of grade retention. If life course research on educational trajectories would reveal, as might be expected, a significant relationship between early grade retention and dropping out, it would reinforce previous reviews that have found more negative than positive immediate effect of grade retention (Jackson, 1975, Holmes and Matthews, 1984).

Discussions of the research with personnel in a school system with a current policy of minimum promotion standards that include the kindergarten year contributed to interpretation and to analysis of policy and program implications of the findings. The findings were interpreted as revealing that children at risk of grade retention have not learned crucial skills prior to school entry. Findings that parent characteristics are less related to retention in later school years may indicate positive effects of schooling

and some positive effects of early retention for specific students. Establishing minimum promotion standards with a policy of grade retention may focus teachers' attention more on the learning needs of individual students. If special programs are developed to meet the needs of students identified as having difficulty meeting minimum standards, the policy effect may be to provide help at an early age to students who might otherwise not be identified.

Program development responses to the problem of grade retention might include a developmental kindergarten program for children at risk. Combination of flexible promotion standards prior to grade 3 with a developmental emphasis in grades K through 2 might allow students to meet minimum promotion standards before entry into grade 3. Summer school programs to allow students more time to master skills needed for the next grade level might also prevent some grade retentions.

Current school system responses include screening and testing of children who are retained for the first time in the early grades. Pilot programs are also being developed to meet the academic needs of the students with repeated retentions. However, school system responses to the problem of grade retention are contingent upon availability of funding as well as policy decisions of school officials.

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